

A B S T R A C T

A CVD apparatus (2) forms an insulating film, which is a silicon oxide film, silicon nitride film, or silicon oxynitride film. The CVD apparatus includes 5 a process chamber (8) to accommodate a target substrate (W), a support member (20) to support the target substrate in the process chamber, a heater (12) to heat the target substrate supported by the support member, an exhaust section (39) to vacuum-exhaust the process 10 chamber, and a supply section (40) to supply a gas into the process chamber. The supply section includes a first circuit (42) to supply a first gas of a silane family gas, a second circuit (44) to supply a second gas, which is an oxidizing gas, nitriding gas, or 15 oxynitriding gas, and a third circuit (46) to supply a third gas of a carbon hydride gas, and can supply the first, second, and third gases together.